

Consideration of the State Alternative Fuels Plan

**Air Resources Board
Public Meeting
November 15, 2007**

Assembly Bill 1007 (Pavley – 2005)

- AB 1007 required CEC to develop and adopt a Plan to increase the use of alternative transportation fuels
- Since 2005, CEC and ARB working in partnership to develop the Plan
- CEC approved Plan on October 31, 2007

Specific Plan Requirements

- Establish alternative fuel use goals for 2012, 2017, and 2022
- Evaluate the environmental impacts of alternative fuels on a full fuel cycle basis
- Recommend policies and strategies to achieve the goals

Alternative Fuels Evaluated

- Ethanol (E10, E85)
- Biodiesel and Renewable Diesel
- Natural Gas
- Propane
- Hydrogen
- Electricity
- Others (DME, biomass to liquids, etc.)

Approach to Develop the Plan

- Assessed each alternative fuel
- Developed plausible scenarios to represent possible alternative fuel use
- Identified actions needed to support each fuel
- Set overall goals based on scenario evaluations
- Considered other State goals
- Extended analysis to 2030 and 2050

Plan Considers Multiple Policy Goals

- Petroleum reduction
- Air quality
- Greenhouse gas reduction
- In-state biofuels production and use

Plan Also Considers Low Carbon Fuel Standard

- Since passage of AB 1007, Governor signed Executive Order establishing the LCFS
- LCFS to achieve a 10% reduction in the carbon intensity of transportation fuels by 2020
- Specific reference to Alternative Fuels Plan
 - CEC to incorporate draft compliance schedule into Plan
 - After submission of the Plan, ARB to initiate LCFS rulemaking

CEC Accelerated Full Fuel Cycle Analysis to Support UC

- During 2007, UCD and UCB jointly developed two reports examining LCFS for California
- CEC accelerated full fuel cycle analysis to support UC Study
- Analysis formed critical basis for UC study
- Full fuel cycle analysis also key basis for Alternative Fuels Plan

Major Findings of the State Alternative Fuels Plan

- The following ambitious, but plausible goals for displacing traditional gasoline and diesel fuel are achievable:
 - 9% in 2012
 - 11% in 2017
 - 26% in 2022
- Goals achieved through combination of alternative fuels and vehicle technologies
- Technology innovation critical
- Mandates, federal and state incentives, and private investment needed to achieve goals

Major Findings - Continued

- A multi-part strategy needed to achieve policy goals that:
 - Maximize use of alternative fuels
 - Advance vehicle technologies
 - Improve vehicle fuel efficiency
 - Reduce vehicle miles travelled
- LCFS provides durable framework for transition to low-carbon alternative fuels and stimulates technology innovation

Achieving 2050 Goal Requires Significant Changes

- Analysis shows challenging but plausible route to 2050 GHG goal
- Substantial changes required; for example:
 - 20% reduction in per capita VMT
 - 70 MPG real world fuel economy
 - 60% reduction in the carbon content of fuels
- Plan and LCFS create the early steps in process

Report Recommendations

- Support \$100 – \$200 million annual incentive funding to advance transportation technology
- CEC/ARB must leverage AB 118 to achieve Plan goals
- Aggressively pursue use of California's biomass to produce energy and fuels
- Encourage substantial private investment
- Implement the plan in consideration of all State policy goals

Energy Commission Action

- Established alternative transportation fuel use goals
- Directed CEC staff to:
 - Update the report every two years
 - Work with ARB and others to update full fuel cycle analysis methodology and develop sustainability standards
 - Continue to refine methodologies
 - Move quickly to implement AB 118

Energy Commission Action - Continued

- Request ARB to:
 - Develop the LCFS in a manner consistent with the Plan's goals
 - Consider the draft compliance schedules identified by the UC in developing the LCFS
 - Consider establishing specific GHG reduction goals for the transportation sector

ARB Staff Proposed Modifications

- ARB and CEC staff concur that several ARB staff recommendations provided during Plan development were inadvertently not included in the final document considered by the CEC
- Modifications cover two areas:
 - An enhanced air quality focus
 - A more meaningful characterization of hydrogen and hydrogen fuel cells
- Upon Board request, CEC would consider only these changes at a future hearing

Staff Recommendations

- Approve the Plan and request CEC to make the proposed modifications
- Direct staff to develop specific GHG goals for the transportation sector
- Direct staff to continue working with the CEC on:
 - Updating and refining the Plan
 - Establishing the LCFS, including the appropriate compliance schedule, and
 - Ensuring AB 118 funds provide the maximum possible air quality benefits